

# NASA scientist: Shift of water availability could persist

BY DANIEL GRANT  
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Shifts in the global water cycle likely will continue and could impact what farmers produce and where they raise it.

Jay Famiglietti, hydrologist/professor at the University of California, Irvine and senior water scientist at the NASA Jet Propulsion Lab, discussed the situation last week at the National Institute for Animal Agriculture annual meeting in Indianapolis.

NASA measures monthly changes in water mass around the globe via its Gravity Recovery and Climate Experiment (GRACE). Launched in 2002, GRACE measures water mass

around the world via two satellites that act as a scale in the sky.

"The water cycle and water availability are changing," Famiglietti said. "We're not losing water. It's just moving from drier regions to wetter regions."

Areas with the greatest groundwater depletion in recent years include California, northern India and the Middle East.

California, mired in a devastating drought, lost about 8 trillion gallons of water each of the last three years. About two-thirds of that was groundwater, Famiglietti noted.

"They're losing more (water) than they use each year (in California)," he said. "It's very serious."

Elsewhere, however, water availability continues to rise. Water availability in the Midwest, for example, trended up in recent years.

"One of the things we're looking at is wet areas in the world are getting wetter and dry areas are getting drier," said Famiglietti, who outlined the issue recently on an episode of CBS News' "60 Minutes."

The shift in water availability could have a major impact on agriculture.

Aubrey Bettencourt, executive director of the California Water Alliance, said ag production out west has been migrating to the Midwest for years due in part to changes

in resource availability.

"We've been seeing that (migration from the west to the Midwest) about 20 years," she said. "We see a lot more industry (in California) looking for other places to go."

Water shortages in California cut off some farms from vital supply lines for irrigation. Water use for agriculture, under drought rules, isn't considered beneficial in some instances, according to Bettencourt, who noted an estimated 800,000 farmland acres could go fallow this year in California due to the drought.

"We're in a fight to prove we know what we're doing (in regard to water use)," she said.

"The future of American ag depends on water availability."

About 8 percent of food produced in the U.S. from about 250 different crops comes from California's central valley, Famiglietti noted.

The water scientist expressed concern that evaporating water availability could lead to further depletion of groundwater sources out west.

"The fear is there will be a water rush to get wells in the ground (in California)," he said. "That's not renewable."

Famiglietti believes the water availability issue shouldn't be urban versus agriculture, but rather an overall plan of how to better allocate water needs.

*What's in a hot dog?*

## Website tackles myths about meat

Did you know beef from grass-fed cattle eliminates the threat of E. coli, or that hormones used in livestock production accelerate the physical development of young women?

Hopefully not, because these statements are false, of course.

But many people believe these and other claims due in part to a growing disconnect between agriculture and the general population along with the digital media boom that continues to change how people receive information.

Janet Riley, senior vice president of public affairs and member services at the North American Meat Institute, last week discussed the

prevalence of meat myths during the National Institute of Animal Agriculture annual meeting in Indianapolis.

The Meat Institute created a website {MeatMythCrushers.com} that busts many of the popular myths currently in circulation about meat.

"We have to be as active and passionate (about getting information to consumers) as our critics are," Riley said. "We need to hold people accountable."

The Internet, unfortunately, doesn't require accountability for "news" posts.

So, misinformation about agriculture, food and meat, in particular, seems to be spreading like wildfire.

"We're in a digital media boom. We're sort of dumbing down the news because more people are reading news on mobile devices," Riley said. "It's just a very different world."

"Myths live on the Internet," she continued. "Context seems to be optional anymore."

As much as farmers and others in the ag

industry probably would like to just ignore some of the outrageous claims about food, it serves consumers and the industry better to tackle them head on, according to Riley.

"We have to engage. It's important to share information and use social media in your circles," she said. "We have to be fearless on this."

Riley noted there are numerous food and ag myths that farmers can help dispel by communicating with consumers.

For instance, some people believe beef from grass-fed cattle eliminates the threat of E. coli when in reality E. coli can be found in about 1 of every 400 samples, regardless of the production method. Cooking destroys the bacteria.

Another ongoing myth suggests it takes about 2,400 gallons of water to produce 1 pound of ground beef when it actually takes about 441 gallons, nearly 300 fewer gallons than it takes to produce a cotton shirt, Riley noted.

What about the use of hormones in pork and poultry production? While all organisms contain hormones, additives aren't allowed in pork and poultry production.

"Breeding techniques are why pigs and poultry are bigger today," Riley said.

So, does processing meat make it much more unhealthy? A study, which pooled data from 14 major studies, found no association between red/processed meat and cancer, according to MeatMythCrushers.com.

Processed meat comes in different formulations to meet a variety of nutritional needs, including low-fat, lower sodium and gluten-free products.

Current USDA dietary recommendations call for Americans to consume 5 to 7 ounces of meat and beans daily.

"Meat is the most nutrient-dense food out there," Riley added. — **Daniel Grant**



Janet Riley

## Inventory buildup, lower prices could slow hog expansion in its tracks

Market signals that determine the size of the swine herd changed from green to yellow in recent months as an inventory buildup prompted prices to take a U-turn.

USDA, in its quarterly hogs and pigs report released Friday, estimated the inventory of all hogs and pigs as of March 1 shot up 7 percent nationwide, to 65.93 million head, compared to the same time last year.

The swine inventory in Illinois increased 9 percent, to 4.65 million head, from a year ago.

The market hog inventory (60 million head) increased 8 percent, while the pig crop (a record 28.8

million head) jumped 9 percent December through February.

"Numbers are significantly larger (than a year ago) across the board," said Steve Meyer, president of Paragon Economics, during a teleconference hosted by the National Pork Board.

The boost in hog inventory was due in part to expansion of the herd along with reduced losses to porcine epidemic diarrhea virus (PEDV), which decimated the herd last year.

"It looks like we're getting back to the long-term upward trend of litters," said Dan Vaught, economist with Doane Advisory Services.

The number of pigs saved per litter was a record 10.17 last quarter compared to 9.53 a year ago.

Chris Hurt, Purdue University economist, believes hog prices on a live weight basis could average between \$50 and \$55 per hundredweight this year. Robert Brown, an independent market analyst, projects a carcass price range of \$66 to \$71 per hundredweight compared to \$92 to \$117 last year.

"The incentive to expand has been sharply cooled off," Hurt said. "I think we'll see modest expansion of the breeding herd."

The breeding inventory on

March 1 totaled 5.98 million head, up 2 percent. Producers intend to boost farrowings 2

percent from March to May followed by a 2 percent decline this summer. — **Daniel Grant**

